

## REMARKS

New claims 88-98 are added. Claims 51 and 55 are amended. Claims 76-78 and 82-85 are canceled. Claims 51-53, 55-59, 62-75, 79-81 and 86-98 remain in the application. Reconsideration of the application in view of the amendments and the remarks to follow is requested.

New claim 88 includes the limitations of independent claim 51 (before amendment herein) and dependent claim 84 (now canceled). Since claim 84 was not rejected in the most recent office action (paper no. 29), claim 88 is allowable. Claims 89-90 are allowable for depending from claim 88.

Claims 51-53, 76-78 and 82-83 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (5,506,178) or Oikawa (JP5-102067 from IDS). Claims 55-59, 68-75, 79, 81, 62-67, and 80 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gardner et al. (5,923,949).

Regarding the rejection of claim 51, claim 51 is amended to include the limitations of claim 85. Claim 85 was not rejected in the most recent office action (paper no. 29), and therefore, claim 51 is allowable.

Claims 52-53 and 91 depend from independent claim 51, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not taught or shown by the art of record.

Regarding the rejection of claim 55 based on Gardner, such claim is amended to recite concentrating at least one of chlorine or fluorine in a gate oxide layer, and **after th** **conc ntrating**, forming sidewall spacers proximate the

opposing edges of the gate and the gate oxide, the **spacers being substantially devoid of fluorine**. The amendment language is supported by an exemplary embodiment of Applicant's invention disclosed at Figs. 1-3 of the originally-filed application. Gardner teaches **forming a spacer layer 207 with fluorine** over gate 203 and gate oxide 205, and then etching spacer layer 207 to form spacers 211 (col. 3, lns. 10-65). This embodiment of the Gardner spacer will be formed with fluorine and never devoid of fluorine as recited in claim 55. Alternatively, Gardner teaches forming the spacer layer, etching to form spacers, and then implanting the fluorine into the spacers (col. 4 lns. 5-11). This embodiment of the Gardner spacer will be devoid of fluorine only before the concentrating, but could not teach after the concentrating, spacers being substantially devoid of fluorine as recited in claim 55. Accordingly, during either formation of the Gardner spacers, at any step of the respective processes, any alleged teaching of concentrating at least one of chlorine or fluorine in a gate oxide layer as recited in claim 55 has to come from the Gardner spacer layer or spacers already concentrated. Therefore, no teaching of Gardner, at any step of any process, could possibly teach or suggest **after the concentrating** [in a gate oxide layer] the **spacers being substantially devoid of fluorine** as recited in claim 55. In no fair or reasonable interpretation does Gardner teach or suggest such positively recited limitation of claim 55, and therefore, claim 55 is allowable.

Claims 56-59, 79, 86 and 92 depend from independent claim 55, and therefore, are allowable for the reasons discussed above with respect to the

independent claim, as well as for their own recited features which are not taught or shown by the art of record.

Regarding the rejection against claim 62 based on Gardner, such claim recites forming sidewall spacers comprising at least one of the chlorine or fluorine proximate the opposing edges and directly elevationally over the gate oxide layer. As is clearly taught by Gardner, Figs. 2A-2E, the entire processing for the structure of Gardner is formed without ever having the sidewall spacers directly elevationally over the gate oxide layer as recited in claim 62. Accordingly, in no fair or reasonable interpretation does Gardner teach or suggest, whether final or intermediate processing of the Gardner structure, the recited limitation of claim 62. The Examiner tacitly admits this by alleging the limitation of the sidewall spacers ... **directly elevationally** over the gate oxide layer is taught by the Gardner structure "when looked at (sic) lateral direction of the gate oxide" (pg. 4 of paper no. 29). However, this is an improper modification to the teachings of Gardner as stated by the Federal Circuit Court, "[a]lthough a prior art device could have been turned upside down, that did not make the modification obvious unless the prior art fairly suggested the desirability of turning the device upside down." *In re Chu* 66 F.3d 292, 36 USPQ2d 1089, 1094 (Fed. Cir. 1995) *citing In re Gordon*, 733 F.2d 900, 221 USPQ 1125, 1127 (Fed. Cir. 1984). The art of record fails to provide any desirability of turning the Gardner device upside down, and without this teaching to such a desirability, the proposed modification to the Gardner is inappropriate pursuant to this authority. Since the Examiner's proposed modification to the Gardner is inappropriate, the

obviousness rejection on which it is based fails and should be withdrawn. Claim 62 is allowable.

Claims 63-67, 80 and 93-95 depend from independent claim 62, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not taught or shown by the art of record.

Regarding the rejection against claim 68 based on Gardner, such claim recites a method comprising the following sequential steps: forming a gate over a gate oxide layer, the gate oxide layer extending laterally past the lateral edges of the gate, and then, forming sidewall spacers comprising at least one of chlorine or fluorine proximate the opposing lateral edges. An exemplary Gardner gate and gate oxide structure (see, for example, Fig. 2A) begins with never teaching or suggesting forming gate oxide layer extending laterally past the lateral edges of the gate but rather shows the gate oxide aligned with the gate. Moreover, Gardner teaches that to arrive at the Fig. 2A structure, "a number of different known fabrication techniques could be used to obtain the gate electrode structure depicted as Figs. 2A" (col. 3, lns. 15-20), and therefore, no inherency argument can be made that Gardner's structures inherently teach the claimed invention of claim 68. "In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). Consequently, in no fair or reasonable interpretation

does Gardner teach or suggest forming gate oxide layer extending laterally past the lateral edges of the gate as recited in claim 68.

Even if Gardner could be modified to allegedly teach the recited limitations of claim 68, this is not enough. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. MPEP §2143.01 (8<sup>th</sup> edition) *citing In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Although a prior art device “may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so”. 916 F.2d at 682, 16 USPQ2d at 1432; MPEP §2143.01; See also *In re Finch*, 972 F.2d, 1260, 23 USPQ2d, 1780 (Fed. Cir. 1992). Finally, in no fair or reasonable interpretation does Gardner teach or suggest the recited limitations of claim 68 performed in the recited **sequential order**. For all the above reasons, in no fair or reasonable interpretation does Gardner teach or suggest the positively recited limitations of claim 68. Claim 68 is allowable.

Claims 69-75, 81, 87 and 96-98 depend from independent claim 68, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not taught or shown by the art of record.


Moreover, claims 86-87 were not presented with any rejections in the most recent office action (paper no. 29). Regarding such, Applicant respectfully requests either allowance of such claims or a new **non-final** office action to allow Applicant the opportunity to address the new rejections.

Further, Applicant herewith submits a duplicate copy of the Supplemental Information Disclosure Statement and Form PTO-1449 filed in this application on January 2, 2003. No initialed copy of the PTO-1449 has been received back from the Examiner. To the extent that the submitted reference listed on the Form PTO-1449 has not already been considered, and the Form PTO-1449 has not been initialed with a copy being returned to Applicant, such examination and initialing is requested at this time, as well as return of a copy of the initialed Form PTO-1449 to the undersigned.

In view of the foregoing, allowance of the pending claims is requested. The Examiner is requested to phone the undersigned in the event that the next Office Action is one other than a Notice of Allowance. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

Respectfully submitted,

Dated: 7-28-03

By:   
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